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Westchester County
Department of Environmental Facilities

Best Management Practices
for
Combined Sewer Overflows

2017 Annual Report

Yonkers Joint Wastewater Treatment Plant
SPDES Permit Number NY0026689

March 1, 2018

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF WATER

COMBINED SEWER OVERFLOWS ANNUAL REPORT

SECTION A. GENERAL INSTRUCTIONS: The Combined Sewer Overflows (CSO) Annual Report is consistent with the EPA CSO Long-Term Control Policy requiring permitting authorities to report "Measures of Success" of the policy implementation. Hence, the goal of this report is to obtain information regarding:

1. Compliance with the 15 CSO Best Management Practices;
2. The condition and operation of the combined sewer system (CSS) components. Most importantly, the end-of-pipe measures that show trends in the discharge of CSS flows to the receiving water body, such as reduction of pollutant loadings, the frequency of CSOs, and the duration of CSOs;
3. Receiving water body measures that show trends of the conditions in the water body to which the CSO occurs;
4. Overall status of the CSO LTCP, if applicable;
5. Key CSO control accomplishments and design and construction progress in the previous year.

Permittee must complete ALL parts of the form and must attach all supporting documents. Please be aware that this annual report form template highlights the minimum requirement a permittee is expected to submit. Permittee is obligated to complete abatement activities to ensure compliance with the Clean Water Act. This report is also consistent with *NYS 6 NYCRR 750-2.1(i)*. Send your questions about this form to dowinfo@gw.dec.state.ny.us or call 518-402-8111.

This reporting format replaces the previous CSO Annual Report Checklist

PERMITTEE NAME: Westchester County Department of Environmental Facilities SPDES PERMIT NO.: NY- 0026689

SECTION B: CSO LTCP GENERAL INFORMATION

CSO Facility:	Yonkers Joint WWTP	**SPDES Number:**	NY- 0026689	
Has implementation of the LTCP Phase II begun?		◯X Yes	◯No	
If No:	◯Not Approved	◯Not Submitted	◯Not Required	
LTCP Approach:	◯Presumptive	◯Demonstrative	(X) Both	

Briefly Describe LTCP Implementation Approach (Attach a Separate Sheet for Detailed Descriptions):

The LTCP was completed and constructed in five phases. The plan involved enlarging the South Yonkers Trunk Sewer, building relief sewers, raising the CSO regulator weirs to minimize the discharge of pollutants, and convey the maximum amount of combined sewage to the treatment facilities at the North Yonkers Pump Station, the South Yonkers Screen House, and the Yonkers Joint Wastewater Treatment Plant. This work has maximized the use of the collection system for storage. The LTCP construction was completed in 1995. The County is in the Post Construction Monitoring phase of the LTCP.

Update any changes or corrections to the outfalls currently listed in SPDES permit. Indicate if any outfalls have been closed. Attach extra sheets, if necessary. Also, include a map showing the locations of each outfall. N/A

Outfall #	Latitude	Longitude	Receiving Water	Notes

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Provide an estimate or actual data on overflow events. If not applicable, describe how CSO abatement is achieved. Use a separate spreadsheet, if necessary, to report all CSO outfalls.

CSO Outfall #	No. of overflow events in the previous year		Total Annual CSO Volume Discharged (MG)		Total Annual Volume Capture or Diverted to POTW (MG)		How is the flow estimated or measured?
	Last Period 2016	This Period 2017	Last Period 2016	This Period 2017	Last Period 2016	This Period 2017	
002	1	5	0.30	4.19	0.32	7.48	Flow Meter
003	11	16	41.84	45.70	80.60	159.49	Flow Meter
008, 010							Not measured*
014, 015							Not measured*
016, 017							Not measured*
018, 021							Not measured*
022, 025							Not measured*
030							Not measured*
TOTAL	12	21	42.14	49.89	80.92	166.97	*Regulator outfalls

Collection System Ownership

	Collection system is owned and maintained by permittee
X	Portions of collection system is owned and maintained by others

Describe ownership and maintenance responsibilities: Westchester County Department of Environmental Facilities owns, maintains and operates the wastewater treatment plant, pumping stations, regulators and trunk sewers in the CSO area. The City of Yonkers owns and operates the combined sewer collection system, catch basins, roads and outfall pipes within the CSO area.

Describe in detail the major progress or milestones achieved in past year (attach extra sheets as necessary):

Not applicable.

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Provide detailed explanations why planned milestones for this year were not achieved (attach extra sheets as necessary):

Not Applicable.

Summarize major projects or milestones planned for upcoming year (attach extra sheets as necessary):

Not Applicable.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title (type or print): G. MICHAEL COLEY, P.E. 1st Deputy Commissioner		Phone:	(914) 813-5412
Signature:	Date 12/27/18	Fax:	(914) 813-5460

MP

PERMITTEE NAME: Westchester County Department of Environmental Facilities SPDES PERMIT NO.: NY-0026689

SECTION C: 15 BEST MANAGEMENT PRACTICES

Check N/A if not required in the permit, consent order, or LTCP:

1. CSO Maintenance/Inspection *6 NYCRR 750-2.8(a)(2)* **N/A** *(EPA NMC: Proper Operation and Maintenance)*	**YES**	**NO**	**N/A**
Is there a written program for the operation, inspection and maintenance of the CSS?	X		
Does the program include procedures for:			
All outfalls in the permit	X		
All regulators	X		
Are inspections conducted at least as frequently as required in the permit (weekly or monthly)?	X		
Are inspections conducted during dry and wet weather?	X		
Do the inspection reports indicate visual inspection, any observed flows, incidence of rain or snowmelt, condition of equipment, and any work required?	X		
Are inspection reports submitted to the DEC regional office with the monthly operating reports?		X	
Is the written program sufficiently detailed? Indicate which of the following additional components are included in the plan:			X
Pump Stations			
Sewer cleaning			
Sediment removal			
FOG removal			
Root removal			
Are there inter-municipal agreements which require inspection and maintenance?		X	
Are any changes planned in the upcoming year for the agreements to make them more effective?			X
Is the collection system mapped using GIS? ***Only County owned sewers**	X		
Entire system, including manholes and catch basins? * **Only County owned structures**	X		
In the past year, was significant mapping progress accomplished?			X
In the upcoming year, is GIS mapping planned?			X
Is the collection system monitored using a SCADA system?		X	
In the past year, was significant progress accomplished in installing or expanding monitoring with a SCADA system?		X	
In the upcoming year, is installation of a SCADA system planned or being expanded?		X	
Does the municipality have an asset management plan that includes the collection system?***Only County Owned**	X		
Are funds available to carry out the BMP requirements?	X		

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1. CSO Maintenance/Inspection (continued)	YES	NO	N/A
Are any major equipment purchases planned or expected in the next five years related to the BMP requirements? If yes, describe below.	☐	☒	☐
Is the pump inventory, including spare parts, adequate for the upcoming year?	☒	☐	☐
Is sufficient staff training available?	☒	☐	☐
Is funding for training adequate and available?	☒	☐	☐
Have any work efforts or problems in the past year resulted in changes in overflows? If yes, describe below.	☐	☒	☐
Fewer events	☐	☐	☐
Less volume	☐	☐	☐
Reduction in floatables, settleable solids or oil and grease discharged	☐	☐	☐
Reduction in industrial pollutants (chemicals)	☐	☐	☐
Improvement in water quality of receiving waterbody	☐	☐	☐

In the past year, was the inspection and maintenance program mostly:
reactive (responding to problems) ○ Reactive
proactive (focusing on preventative maintenance to avoid problems)? ⊗ Proactive

If the program is mostly reactive, describe below any plans to shift the emphasis to prevention.

Westchester County Department of Environmental Facilities owns, maintains and operates the wastewater treatment plant, pumping stations, regulators and trunk sewers in the CSO area. The City of Yonkers owns and operates the combined sewer collection system, catch basins, roads and outfall pipes within the CSO area.

The LTCP was completed and constructed in five phases. The plan involved enlarging the South Yonkers Trunk Sewer, building relief sewers, raising the CSO regulator weirs to minimize the discharge of pollutants, and convey the maximum amount of combined sewage to the treatment facilities at the North Yonkers Pump Station, the South Yonkers Screen House, and the Yonkers Joint Wastewater Treatment Plant. This work has maximized the use of the collection system for storage. The LTCP construction was completed in 1995. The County is in the Post Construction Monitoring phase of the LTCP.

The County has in place a C.M.O.M. program that includes a program of Sewer Video Inspections. Under this program, all County-owned sewers were mapped and located using Global Position Satellite equipment. Additionally, all County-owned sewers will be video inspected over an approximate 10-year cycle, and any cleaning, root removal or repairs are performed as needed based on the results of the inspection. A video inspection schedule has been included in Appendix 4 of this report.

The County C.M.O.M. program also includes a program consisting of inspections of the Regulators and Tide Gates. Each Regulator and Tide Gate is visually inspected to ensure proper operation and to maximize flow to the treatment facilities. The inspections occur a minimum of once per week in accordance with the Yonkers Joint WWTP SPDES permit. If needed, any debris that would hinder proper operation is removed. In addition, all Regulators and Tide Gates are inspected at the first low tide after a rain event, and any debris preventing full closure of the Tide Gates is removed.

2. Maximum Use of Collection System for Storage *6 NYCRR 750-2.7(f), 750-2.8(a)(2), 750-2.8(a)(5)* ☐ N/A *(EPA NMC: Maximum Use of Collection System for Storage)*	Yes	No	N/A
Are CSOs minimized, and flow to the treatment plant maximized?	X		
Has the hydraulic capacity of the system been evaluated?	X		
Is there a continuous program of flushing and cleaning to prevent deposition of solids?	X		
Have regulators and weirs been adjusted to maximize storage without causing service backups?	X		
In the past year or the upcoming year, have any changes to structures or procedures been made or planned that will improve use of the collection system for storage? Describe below.		X	
Tidegates maintenance/repairs/replacement			
FOG program			
Removal of small systems bottlenecks			
Sewer cleaning and sediment removal			
Removal of flow obstructions			
Regulator or weir adjustment - list locations below			
In-line storage: Inflatable dams or sluice gates			
Wet Weather Operating Plan			
Do the municipalities within the combined sewer system have a water conservation program for homeowners?			X
In the upcoming year are there any studies, work, or projects planned (other than routine activities) to improve use of collection system for storage? Describe below.		X	

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3. Industrial Pretreatment *6 NYCRR 750-2.7(f) and 2.9(a)(4* ☐ N/A *(EPA NMC: Review and Modify Pretreatment Requirements)*	YES	NO	N/A
Has the impact on CSOs from nondomestic users that discharge toxic pollutants been evaluated, and steps taken to minimize such impacts?	X		
Is there an approved pretreatment or mini-pretreatment program?	X		
If there is no pretreatment or min-pretreatment program, are there any nondomestic users? If No to both of the previous questions, go to BMP 4.			X
Is there an inventory of industrial dischargers? Is the following information included?	X		
Volume of discharge?	X		
Pollutants in discharge?	X		
Are any pollutants classified as "persistent toxics" or bioaccumulative?		X	
Is the location included on the collection system map?	X		
Are there any industrial discharges that could reach CSO outfalls?		X	
If yes, have any industrial dischargers been identified as contributing to a water quality impairment?			
If yes, does the industry have a holding tank or EQ tank to store wastewater prior to discharge to the collection system?			
If yes, does the industry have a written plan to store or hold discharges during rain events?			
If yes, has the industry been asked to prepare a written plan to store or hold discharges?			
In the past year, have there been negotiations or changes to agreements with industrial dischargers which will potentially reduce impacts during CSO events? Describe below.		X	
In the upcoming year, are any negotiations or changes to agreements with industrial dischargers planned which will potentially reduce impacts during CSO events? Describe below.		X	

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4. Maximize Flow to POTW *6 NYCRR 750-2.7(f), 2.8(a)(2), and 2.8(a)(5)* ☐ N/A *(EPA NMC: Maximum Flow to POTW for Treatment)*	YES	NO	N/A
In the past year, was the headworks, primary treatment works and disinfection works able to pass the flows specified in the permit for all wet weather flows?	X		
In the past year, was the secondary treatment works able to treat the flows specified in the permit for all wet weather flows?	X		
If the answer to either of the above questions was No, has a plan and schedule to accomplish this been submitted to the Department?			X
In the past year have there been any physical modifications to the collection system which have allowed more flow to reach the POTW? Describe below.		X	
Are any physical modifications planned for the upcoming year?		X	
Are there areas of the collection system, including pump stations, that need additional study to evaluate capacity, condition, or to determine if illegal connections (i.e. inflow) exist? List below.		X	
In the past year, have any new problem areas been identified that restrict flow to the plant? List locations below.		X	
In the upcoming year, are there plans to address hydraulic restrictions or bottlenecks?			X
Pipe replacement			
Construction of relief sewer			
Construction of overflow tank			
Pump station improvements			
Pump replacement			
Weir adjustment			
Smoke testing, dye testing to identify illicit connections			
Other:			

Hydraulic conditions in the County owned facilities in the CSO area were addressed in the LTCP construction that was completed by the year 1995. The LTCP was completed and constructed in five phases. The plan involved enlarging the South Yonkers Trunk Sewer, building relief sewers, raising the CSO regulator weirs to minimize the discharge of pollutants, and convey the maximum amount of combined sewage to the treatment facilities at the North Yonkers Pump Station, the South Yonkers Screen House, and the Yonkers Joint Wastewater Treatment Plant. This work has maximized the use of the collection system for storage. The LTCP construction was completed in 1995. The County is in the Post Construction Monitoring phase of the LTCP.

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5. Wet Weather Operating Plan (WWOP) *6 NYCRR 750-2.8(a)* ☐ N/A *(EPA NMC: None)*	YES	NO	N/A
Has a WWOP been developed, specifying procedures for unit operations, to maximize treatment during wet weather events while not diminishing effluent quality or destabilizing treatment upon return to dry weather operation?	X		
In the past year, did treatment of wet weather flows cause any effluent violations or destabilize treatment upon return to normal service?		X	
Has the WWOP been developed in accordance with the DEC guidance, "Wet Weather Operating Practices for POTWs with Combined Sewers"? If no, describe changes needed.	X		
Has the WWOP been submitted to the Regional Office and Bureau of Water Permits (Albany) for review and approval?	X		
If the collection system or plant has been modified or upgraded, has the WWOP been modified to reflect new flow rates or new procedures?		X	
If yes, has the revised plan been submitted to the Regional Office for approval?			
Does the plan identify the maximum flows through preliminary, primary, secondary treatment, tertiary, and disinfection units?	X		
In the upcoming year, are changes to the plan expected?	X		

Describe the status or attach a copy of any updated plan:

Updated Plan is attached at the end of this report.

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6. Prohibition of Dry Weather Overflows *6 NYCRR 750-2.7 and 2.8(b)(2)* ☐ N/A *(EPA NMC: Eliminate Dry Weather Overflows)*	YES	NO	N/A
In the past year, were there any dry weather overflows? If no, skip to BMP 7.	X		
Were all dry weather overflows reported in accordance with 6 NYCRR Part 750-2.7 (incident reporting)?	X		
If dry weather overflows occurred, indicate which procedures or equipment have been improved or replaced.			
Schedule for routine inspections		X	
Capacity, management, operation and maintenance program		X	
Modification of existing or issuance of new inter-municipal agreements			X
FOG program		X	
Removal of illicit connections		X	
I/I Control program		X	
Leaky tidegates		X	
Adjustment and/or repair of regulators		X	
Pumps		X	
Auxiliary power		X	
Elimination of hydraulic bottlenecks			X
Adequate dry weather flow capacity at the treatment plant			X
Other, list below	X		
Has additional staff training been provided?	X		
Has the likelihood of future dry weather overflows been eliminated? If not, describe additional information below.		X	

It is impossible to eliminate the likelihood of future dry weather overflows in the CSO area. It is only possible to minimize the likelihood of occurrences through the proper implementation of BMP's.

There was one dry weather overflow from a North Yonkers Pumping Station in 2017. On April 22, 2017, a discharge of partially treated/chlorinated sewage occurred from the North Yonkers Pumping Station as a result of a power loss and tripping of the main 3,000 amp service switch that shut down the main pumps. The discharge occurred over a period of 54 minutes until the power and switch could be restored.

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7. Control of Floatables and Settleable Solids *6 NYCRR 750-2.8(a)(4)* ☐ N/A *(EPA NMC: Control of Solid and Floatable Materials in CSOs)*	YES	NO	N/A
In the past year, did any outfalls discharge floating solids, oil and grease, or solids of sewage origin?	X		
Have BMPs been implemented to eliminate or minimize the discharge of floatables and settleable solids?	X		
Have any of the following measures been implemented (either existing from previous years, in the past year) or will any be implemented in the upcoming year? If significant progress has been made in implementing these, or if significant improvements have occurred, describe below.			
Floatables quantification	N/A		
Booming and skimming of open waters	N/A		
Source controls (street cleaning, public education, household hazardous waste collection, solid waste collection, recycling, and/or composting of lawn/leaf/roadkill deer	F.O.G. Public Education		
In-line netting	N/A		
Screens	N/A		
Catch basin hoods	N/A		
Other (Explain Below):	Swirl Concentrators		
Are any changes needed or planned for the upcoming year? Describe additional information below.		X	

The South Yonkers Screen House and North Yonkers Pump Station CSO facilities have swirl concentrators for the control of floatables and settleable solids. The North Yonkers Pump Station CSO facility has a SPDES permit limit for oil and grease discharges of 40 mg/l for total oil and grease, 15 mg/l for petroleum oil and grease and no visible sheen from oil and grease from the CSO discharges. No violations for oil and grease discharges occurred from this facility in 2017. There was one fecal coliform violation on May 26, 2017 as a result of the Westchester County Lab failing to set the samples within the 8 hour holding time as required by the USEPA.

The South Yonkers Screen House CSO facility has a SPDES permit limit for oil and grease discharges of 40 mg/l for total oil and grease, 15 mg/l for petroleum oil and grease and no visible sheen from oil and grease from the CSO discharges.

8. Combined Sewer System Replacement *6 NYCRR 750-2.10(i)* [X] N/A *(EPA NMC: None)*	YES	NO	N/A
In the past year, were any combined sewers designed or constructed that were not approved by DEC?	☐	☐	☐
If yes, was the combined sewer replaced by separate sanitary and storm sewers to the greatest extent possible?	☐	☐	☐
If yes, were the separate sanitary and storm sewers designed and constructed simultaneously but without interconnections to the maximum extent practicable?	☐	☐	☐
Is the combined portion of the collection system completely identified on maps or GIS?	☐	☐	☐
Are there any plans or current projects to separate combined sewers into sanitary and storm sewers?	☐	☐	☐
Is there an approved engineering plan for this project?	☐	☐	☐
In the past year, how many feet of combined sewer were separated? _____ft			
In the upcoming year, how many feet of combined sewer are scheduled to be separated? _____ft			
Are the sewer replacement projects on schedule? If no, describe below.	☐	☐	☐
Overall, has the implementation of this BMP resulted in fewer overflow events and/or less volume discharged? Describe below.	☐	☐	☐

The roads, catch basins and the combined sewer system collection system is owned, operated and maintained by the City of Yonkers.

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9. Combined Sewer Extension *6 NYCRR 750-2.10(i)* [X] N/A *(EPA NMC: None)*	YES	NO	N/A
In the past year, were any combined sewers extended not using separate sewers?	☐	☐	☐
Were sanitary and storm sewers extensions designed and constructed simultaneously but without interconnections?	☐	☐	☐
Were any new sources of stormwater added to a separate sewer anywhere in the collection system?	☐	☐	☐
If separate sewers were extended from combined sewers, was it demonstrated that the sewerage system had the ability to convey, and the treatment plant had the ability to adequately treat, the increased dry-weather flows?	☐	☐	☐
If determined necessary by the Regional Water Engineer, was an assessment made of the effects of the increased flow of sanitary sewage or industrial waste on the strength of CSOs and their frequency of occurrence, including the impacts upon best usage of the receiving water?	☐	☐	☐
Has a recent combined sewer extension resulted in increased discharge from a CSO?	☐	☐	☐
Has a recent combined sewer extension resulted in increased flow to the POTW? Describe any CSO impacts below.	☐	☐	☐
Is any development planned upstream of a combined sewer?	☐	☐	☐
If yes, has a sewer extension plan been submitted for review and approval?	☐	☐	☐
If the approval contained a flow credit requiring removal of I/I, what was the requirement or ratio?	☐	☐	☐
Does the plan include any flow retention structures?	☐	☐	☐

Describe additional information here:

The roads, catch basins and the combined sewer system collection system is owned, operated and maintained by the City of Yonkers.

10. Connection Prohibitions *6 NYCRR750-2.9(a)(5)* [X] N/A *(EPA NMC: None)*	YES	NO	N/A
In the past year, were any sewer connections approved, in spite of a notice from DEC to prohibit further connections due to documented, recurrent instances of sewage backing up into houses or discharges of raw sewage onto the ground surface from surcharging manholes?	☐	☐	☐
Are new connections prohibited by the DEC? If no, skip to BMP 11.	☐	☐	☐
Is this due to basement backups?	☐	☐	☐
Is this due to surcharging manholes?	☐	☐	☐
In the upcoming year, is any work planned to either increase capacity or reduce hydraulic loading ? Describe below.	☐	☐	☐

11. Septage and Hauled Waste *6 NYCRR750-2.7(f) and 2.8(a)(1)* ☐ N/A *(EPA NMC: None)*	YES	NO	N/A
In the past year, has there been any discharge or release of septage or hauled waste into the collection system upstream of a CSO?	X		
Does the facility have authorization from DEC to accept hauled waste or septage at a location other than the POTW? Describe below.	X		
Are any of these locations upstream of a CSO?	X		
Are there any agreements with haulers to accept waste at a location other than at the POTW?	X		
In the past year, was any hauled waste or septage accepted at a location other than at the POTW?	X		
What was the total volume received at locations other than the POTW? **Year 2017** **(Gallons)**	**13,349,048**		
Is there a dedicated location to discharge septage at the POTW?	X		
Are there restrictions on when the plant accepts hauled waste or septage?	X		
Have there been any changes to the POTW's policy on septage and hauled waste in the past year? Are any changes needed or planned in the upcoming year?		X	

If yes, describe additional information below:
Septage and hauled waste is permitted to be discharged and received at the existing Hawthorne Septage Receiving Station. All disposal of septage and holding tank waste at the Hawthorne Receiving Station shall be suspended when the flow measured at the North Yonkers Pumping Station reaches 50 million gallons per day (50 mgd) and there is ongoing precipitation. Disposal at the Hawthorne Receiving Station shall remain suspended during the entire combined sewer overflow (CSO) event at the North Yonkers Pumping Station. The discharge of septage and holding tank wastes at the Hawthorne Receiving Station may resume when either condition below has been met.

a) Flow at the North Yonkers Pumping Station falls below 50 mgd and measurable precipitation has ceased.
b) A minimum of four (4) hours have elapsed since the occurrence of the CSO event.

The dedicated location to receive septage at the Yonkers Joint WWTP is the South Control Structure within the plant.

12. Control of Run-off *6 NYCRR750- 2.1(e)* [X] N/A *(EPA NMC: None)*	YES	NO	N/A
Is sediment in runoff from construction zones entering catch basins in the combined sewer system?	☐	☐	☐
Is there adequate communication between the local municipal department that enforce local stormwater codes and ordinances and the collection system staff regarding stormwater runoff?	☐	☐	☐
Do the municipalities within the combined sewer system have adequate storm water pollution prevention programs to reduce pollutants in stormwater?	☐	☐	☐
Annual household hazardous waste collection	☐	☐	☐
Autumn leaf collection	☐	☐	☐
Lawn clippings	☐	☐	☐
Christmas tree pickup	☐	☐	☐
Roadkill deer composting	☐	☐	☐
Fertilizer and pesticide management	☐	☐	☐
Enforcement of litter laws	☐	☐	☐
Public education programs on composting	☐	☐	☐
Are any changes needed in the implementation of this BMP to reduce the number of CSO events, the volume discharged, or pollutants in the discharge? If yes, describe below.	☐	☐	☐

The roads, catch basins and the combined sewer system collection system is owned, operated and maintained by the City of Yonkers.

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13. Public Notification *6 NYCRR 750-1.12* ☐ N/A *(EPA NMC: Public Notification)*	YES	NO	N/A
Have identification signs been installed and maintained at all CSO outfalls owned and operated by the permittee?	X		
Are all signs placed at or near the outfall?	X		
Are the signs easily readable by the public?	X		
Are the signs a minimum size of 18" by 24"?	X		
Do the signs have white letters on a green background?	X		
Do all the signs contain the following information:			
SPDES permit number	X		
Outfall number	X		
Permittee name, contact name and phone number at business office or NYSDEC Division of Water regional contact address and phone number	X		
For waters that are Class B or higher, is a public notification program implemented to inform citizens of the location and occurrence of CSO events?	X		
Does this program include a mechanism (public media broadcast, standing beach advisories, newspaper notice, etc) to alert potential users of the receiving waters affected by CSOs?	X		
Does this program include a system to determine the nature and duration of conditions that are potentially harmful to users of these receiving waters due to CSOs?	X		
Were there any problems in the past year with missing or damaged signs? Describe below.		X	
Is there a written public notification plan?	X		
Does the plan list all methods used to notify the public of CSO events?	X		
Does the plan list outfalls where signs are posted?		X	

On May 1, 2013 the Sewage Pollution Right to Know Law took effect. The Law requires notification to NYSDEC within 2 hours and the Public within 4 hours of becoming aware of an illicit sewage discharge. The County has interpreted the law to also include permitted discharges from the CSO treatment facilities at the North Yonkers Pumping Station and Yonkers Joint WWTP. The Westchester County Department of Environmental Facilities makes notification through NY Alert as required by the NYSDEC within the times required by the SPRTK Law.

14. Characterization and Monitoring *6 NYCRR 750-1.11(a), 2.5(a) and 2.7(g)* ☐ N/A *(EPA NMC: Monitoring)*	YES	NO	N/A
If required in the permit, has the combined sewer system been characterized to determine the frequency of overflows, and identify CSO impacts?	X		
Was a baseline sampling program established as part of the LTCP development?	X		
Are all outfalls monitored during discharge events for:			
Flow Volume: MG/year		X	
Frequency: Times/year		X	
Duration: Hours/year		X	
If all outfalls are not monitored, explain below how sufficient data is obtained to document the success of the BMPs.			
List locations of rain gauges or the source of data, below.			
Has a Post Construction Modeling and Monitoring plan been submitted to the Department for review and approval?	X		
Has the Department approved the Post Construction Modeling and Monitoring plan?	X		
Has post construction monitoring and modeling of the receiving water begun? Attach results if this has not already been provided.	X		

Describe in details the status of Post Construction Monitoring Plan

In 2006, the County installed flow monitors in all CSO regulator outfalls that discharged to the Hudson River and began a program of monitoring overflows and quantifying volume of overflows at the regulators. This five year flow monitoring program began in April, 2006 and concluded on March 31, 2011. Monthly reports with flow data for the entire month were submitted to the County for the period ending on March 31, 2011 by its consultant. The County was able to use the data in our consultant's reports to estimate combined sewage flow during these events. We were then able to estimate the percent of flow captured in the Yonkers Joint Treatment Plant, the North Yonkers Pump Station CSO Treatment Facility and the South Yonkers Screen House CSO Treatment Facility. The reports provided the County with an estimate of the flow volume passing through the regulators. For the entire 5 year flow monitoring period, it is estimated that the percent capture of combined sewage at the Yonkers Joint treatment plant and the CSO Treatment Facilities was 98.1%.

In accordance with the Post-Construction Monitoring Plan the County completed a sampling program in 2007 to assess the impacts, if any, of these CSO facilities. The Final Sampling Report was completed by the County and approved by NYSDEC on September 22, 2008. Based upon the results in the sampling report, it was concluded that the CSO discharges do not impact the CSO area and CSO program is adequate to protect water quality. The sampling program is required to be performed once during a five year period as per the SPDES Permit renewal of 2013. The sampling program was again performed in 2014. The Final Sampling Report was completed by WCDEF and was submitted to NYSDEC on October 30, 2014.

Based upon the 2014 bacteriological sample results and the dissolved oxygen profiles, it can be concluded that water quality in the Hudson River in the CSO area is not suffering long term impacts from the CSO discharges, and that the CSO program is adequate to protect water quality. It was also further observed that the bacteriological and dissolved oxygen sample results were of the same order of magnitude as the 2007 sample results.

PERMITTEE NAME: Westchester County Department of Environmental Facilities SPDES PERMIT NO.: NY- 0026689

15. Annual Report *6 NYCRR 750-2.1(i)* ☐ N/A *(EPA NMC: None; Required in LTCP permit)*	YES	NO	N/A
Is this report being used to satisfy BMP 15, Annual report, and the BMP checklist?	X		
Is existing documentation of implementation of the BMPs included?	X		
Is this annual report submitted by January 31 to the Regional Office and the Bureau of Water Permits (Albany)?		X	
Attach any additional information necessary to document the implementation of BMPs in the past year or list plans for the upcoming year.			
Overall, was implementation of the BMPs effective in controlling and minimizing CSO discharges?	X		
If no, list below any improvements needed that have not been described elsewhere.			

The Yonkers Joint WWTP Plant SPDES Permit #NY0026689 lists the Annual Report as BMP#16, which requires submission of the annual report by March 1st of each year to the Regional Office.

SECTION D: GLOSSARY/ACRONYMS

For the purposes of this annual report, the following terms and acronyms are described below:

Best Management Practice (BMP): Permit condition used in place of or in conjunction with effluent limitations to prevent or control the discharge of pollutants. May include schedule of activities, prohibition of practices, maintenance procedure, or other management practice. BMPs may include, but are not limited to, treatment requirements, operating procedures, or practices to control plant site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

Bypass: A discharge of wastewater, stormwater, or combination of both, around a treatment unit designed for the removal of pollutants.

Catch Basin: A chamber usually built at the curbline of a street, which admits surface water for discharge into a storm drain

Collection System: A wastewater collection system which conveys sanitary wastewaters (domestic, commercial and industrial wastewaters) and stormwater through a single pipe to a publicly owned treatment works for treatment prior to discharge to surface waters.

Combined Sewer: A sewer designed to carry wastewater and stormwater runoff.

Combined Sewer Overflows (CSO): A discharge of untreated wastewater from a combined sewer system at a point prior to the headworks of a publicly owned treatment works. CSOs generally occur during wet weather (rainfall or snowmelt). During periods of wet weather, these systems become overloaded, bypass treatment works, and discharge directly to receiving waters.

Combined Sewer System (CSS): A wastewater collection system that conveys sanitary wastewaters and storm water through a single pipe to a publicly owned treatment works for treatment prior to discharge to surface waters.

Demonstrative Regulatory Approach: Control approach where a permittee develops and implement an LTCP that meets the state water quality standards. A permittee could develop an LTCP that would provide for attainment of water quality standar ds, or it could use a total maximum daily load (TMDL) to demonstrate that water quality standards can be attained through a combination of CSO controls and other controls.

EPA: Environmental Protection Agency

EQ Tank: Equalization Tank often used to smooth hydraulic peaks to a POTW or WWTP.

Fats Oil & Grease (FOG)

Geographic Information System (GIS): A computer-based tool for mapping and analyzing features in the environment. GIS support a wide range of activities including water quality modeling, watershed planning, and wetlands permitting and mitigation.

GI: "Green" Infrastructure

Infiltration/Inflow (I/I): Rainwater, snowmelt, or groundwater flowing into separate sanitary or combined sewers, typically introduced via connected roof downspouts and/or building footing drains or infiltrating into the pipe through cracks in the pipe walls or joints.

This Period: Period covering the last 12 months from January to December.

Last Period: Activities covering the 12 calendar months prior to the end of the current period.

Long Term Control Plan (LTCP): An engineering document that characterizes and assesses CSO discharge to a receiving waterbody. The goal of the Plan is to comply with the water quality standards of the receiving waterbody.

Million Gallons per Day (MGD): A unit of flow commonly used for wastewater discharges. One MGD is equivalent to 1.547 cubic feet per second.

Nine Minimum Controls (NMC) provide information on nine minimum technology-based controls that permittees are expected to use to address CSO problems, without extensive engineering studies or significant construction costs, before long-term measures are taken.

NYSDEC: New State Department of Environmental Conservation (interchangeably uses as DEC)

Publicly Owned Treatment Works (POTW): Also commonly referred to as "treatment facility, WWTP (Wastewater Treatment Plant)

SPDES Permit: State Pollutant Discharge Elimination System Permit. A permit issued by DEC, authorized under the federal Clean Water Act, to discharge treated wastewater to waters of the United States.

Overflow Events: An event starts once an overflow starts from an outfall, and ends once the overflow stops and the pumpback to treatment facility have ended.

Presumptive Approach: The presumption approach is based on the assumption that an LTCP that meets certain minimum defined performance criteria. The "presumption approach," under which achievement of certain performance criteria (i.e., 4-6 untreated overflow events or 85 percent by volume capture) would be presumed to provide an adequate level of control to attain water quality standards

Raw Sewage: Untreated sanitary sewage.

Sanitary Sewer Overflow (SSO): An untreated or partially treated sewage discharge from the sanitary sewer collection system.

Separate Sewer (SS): A pipe or conduit intended to convey only sanitary sewage to a wastewater treatment facility.

SPDES: State Pollutant Discharge Elimination System

Sewer System: A public or privately owned wastewater collection facility designed and used to convey or treat sanitary sewage or sanitary sewage and storm water. Sewer system does not include an on-site wastewater treatment system serving one residential unit or duplex.

Supervisory Control And Data Acquisition (SCADA): A complex computer system that provides automatic control of stormwater storage and overflows at various locations within the sewer system.

Volume Discharged: Total discharge volume for the event (in millions of gallons) from each CSO outfall within this reporting period.

Volume Captured: Total discharge volume for the event (in millions of gallons) that were either captured via an offline treatment facility before discharge or diverted to the WWTP for treatment.

WWOP: Wet Weather Operating Plan

Water Quality Standards (WQS): Regulations that establish the uses for which surface waters of the state are protected and include numeric and narrative criteria to protect those uses.

Appendix 1

Summary of Discharge Events
at
North Yonkers Pump Station
South Yonkers Screen House

WESTCHESTER COUNTY
DEPARTMENT OF ENVIRONMENTAL FACILITIES
DIVISION OF MAINTENANCE
North Yonkers Pumping Station
Combined Sewer Overflow Treatment Facility
Discharge Monitoring Report
2017 ANNUAL SUMMARY

Date	Time	BOD	Settleable Solids TSS	Settleable Solids Influent	Settleable Solids Effluent	Oil & Grease		Flow Volume Influent	Flow Volume Effluent	Chlorine Residual	Fecal Coliform		Visual Floatables	Visual Oil Sheen	TPH		Sodium Hypo.
		(mg/l)	(mg/l)	(ml/l)	(ml/l)	(mg/l)		(MGal)	(MGal)	(mg/l)	(No./100ml)		(Y=1, N=0)	(Y=1, N=0)	(mg/l)		(gal)
1/23/2017	11:45 PM										3		0	0			
1/24/2017	5:15 AM	41	86	2.2	1.5	17.5		20.760	2.280	2.9	6		0	0	6.0		2564
2/25/2017	8:15 PM										3		0	0			
	8:45 PM	123	309	3.8	3.3	8.2		3.470	0.390	3.0	3		0	0	5.0		418
3/31/2017	8:00 PM										3		0	0			
	11:00 PM	55	55	2.4	1.7	12.1		12.130	1.350	9.7	3		0	0	5.0		895
4/4/2017	4:00 AM										3		0	0			
	8:00 AM	22	67	2.1	1.5	9.2		24.150	10.290	5.1	3		0	0	5.0		1193
4/6/2017	5:30 PM										3		0	0			
	8:30 PM	59	104	2.0	1.0	5.0		14.020	3.240	5.2	3		0	0	5.0		994
4/25/2017	10:00 PM										6		0	0			
	10:30 PM	56	107	2.8	1.4	15.5		3.530	0.450	3.4	6		0	0	5.6		
5/5/2017	12:50 PM										104		0	0			
5/6/2017	1:30 AM	84	98	2.0	1.4	5.2		52.930	12.630	3.7	3		0	0	5.0		3131
5/6/2017	2:20 AM										3		0	0			
	4:20 AM	2	66	1.9	0.9	7.2		7.920	0.740	7.3	3		0	0	5.0		248
5/13/2017	4:15 PM										3		0	0			
5/14/2017	2:15 AM	61	64	2.3	1.6	8.9		38.270	5.930	3.4	3		0	0	5.0		1789
5/26/2017	1:20 AM										Lab Error	1	0	0			
	1:35 AM	65	102	3.8	3.0	15.6		2.726	0.410	1.5	Lab Error	1	0	0	5.0		
7/7/2017	12:00 PM										3		0	0			
	1:30 PM	55	79	2.2	1.3	11.1		9.480	3.320	3.4	3		0	0	6.6		1008
7/7/2017	11:30 PM										3		0	0			
7/8/2017	1:15 AM	51	89	1.5	0.8	8.2		9.200	2.270	3.0	3		0	0	7.8		944
7/24/2017	12:20 PM										3		0	0			
	1:10 PM	48	82	3.0	2.3	9.7		6.600	2.400	3.3	3		0	0	5.4		745
8/5/2017	6:00 AM										3		0	0			
	7:30 AM	33	89	2.7	1.8	7.6		9.550	3.390	2.6	3		0	0	5.3		696
8/18/2017	9:00 AM										3		0	0			
	10:00 AM	51	115	3.2	2.0	7.7		6.920	2.300	3.5	3		0	0	7.5		795
10/29/2017	2:45 PM										3		0	0			
10/30/2017	1:15 AM	66	86	2.3	1.8	9.3		49.760	15.880	3.5	3		0	0	5.0		5964
AVERAGE								Total:	Total:				Total:				Total:
MAXIMUM		123	309	3.8	3.3	17.5	0	205.19	45.70	9.7	104	2	0	0	7.8		13928

NOTES: Unless indicated, all parameters are measured at the effluent discharge weir.
Influent = Flow entering North Yonkers PS.
Effluent = Flow discharged to Hudson river.
Shaded values are laboratory minimum detection limits. Actual value is less than this value.
A small number next to the Oil & Grease or Fecal Coliform result indicates a permit voilation.

PERMIT LIMITS: Oil & Grease = 40 mg/L
Fecal Coliform = 2400 No./100ml

WESTCHESTER COUNTY
DEPARTMENT OF ENVIRONMENTAL FACILITIES
DIVISION OF MAINTENANCE
South Yonkers Screen House
Combined Sewer Overflow Treatment Facility
Discharge Monitoring Report
2017 ANNUAL SUMMARY

Date	BOD (mg/l)	TSS (mg/l)	Settleable Solids Influent (ml/l)	Settleable Solids Effluent (ml/l)	Oil & Grease (mg/l)		Flow Influent (MGal)	Flow Effluent (MGal)	Chlorine Residual (mg/l)	Fecal Coliform (No./100ml)		Visual Floatables (Y=1, N=0)
3/31/2017	29	30	8.0	3.0	11.0		0.31	0.18	11.0	3		0
4/4/2017	29	74	4.0	2.0	5.0		3.64	1.39	11.0	164		1
4/6/2017	78	100	1.0	3.0	7.0		2.04	0.68	11.0	6		1
5/5/2017	92	128	1.0	2.5	34.0		5.40	1.83	11.0	92		0
10/30/2017	37	45	0.0	0.0	11.0		0.28	0.11	11.0	3		0
AVERAGE	53	75	2.8	2.1	13.6		Total:	Total:	11.0	54		Total:
MAXIMUM	92	128	8.0	3.0	34.0	0	11.67	4.19	11.0	164	0	2

NOTES: Unless indicated, all parameters are measured at the effluent discharge weir.
Influent = Flow entering South Yonkers Screen House.
Effluent = Flow discharged to Hudson river.
Shaded values are laboratory minimum detection limits. Actual value is less than this value.
A small number next to the Oil & Grease or Fecal Coliform result indicates a permit voilation.
* Value provided as guide. Sample hold time exceeded and cannot be used for reporting.

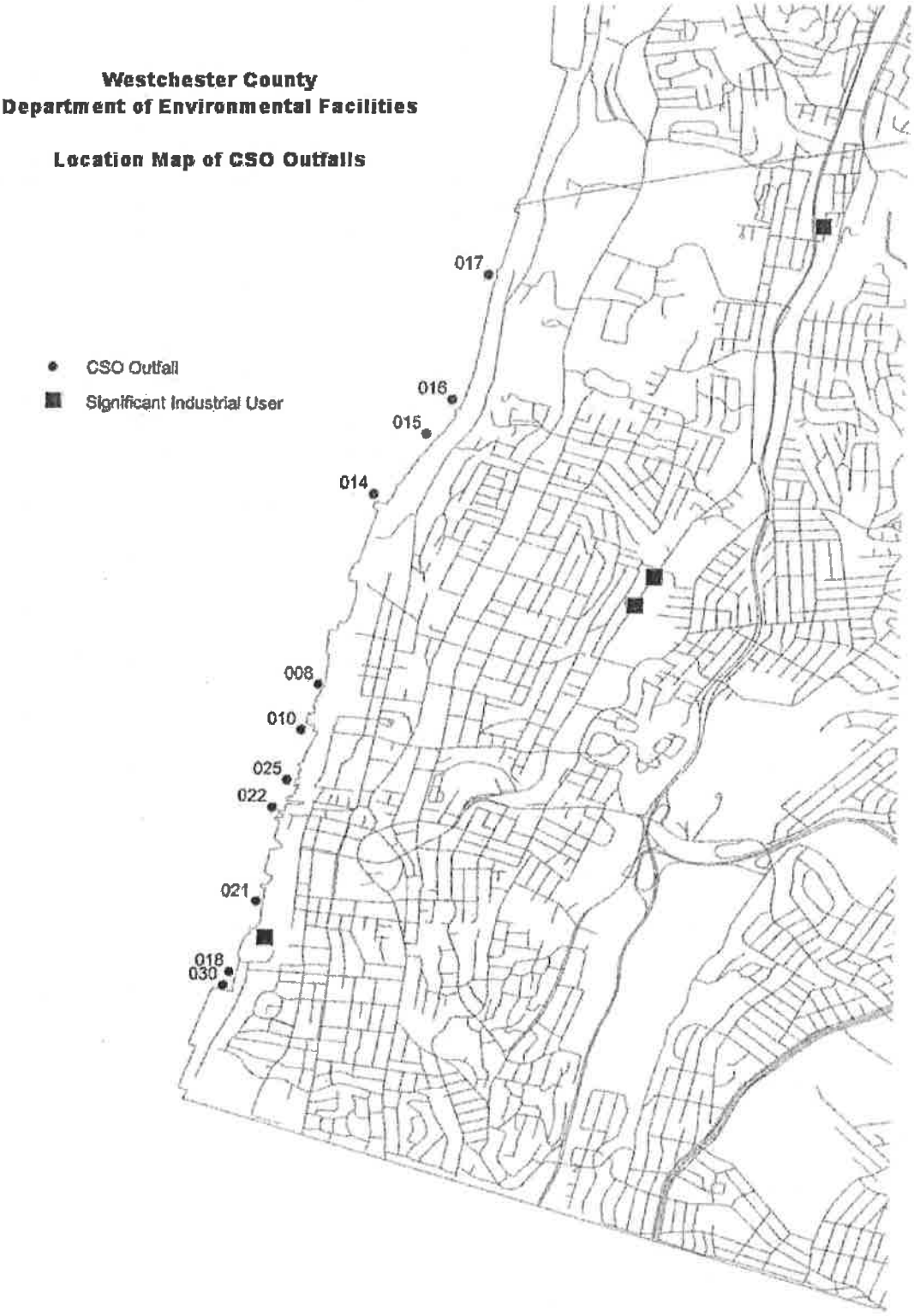
PERMIT LIMITS: Oil & Grease = 40 mg/L
Fecal Coliform = 2400 No./100ml

Appendix 2

Location Map of C.S.O. Outfalls

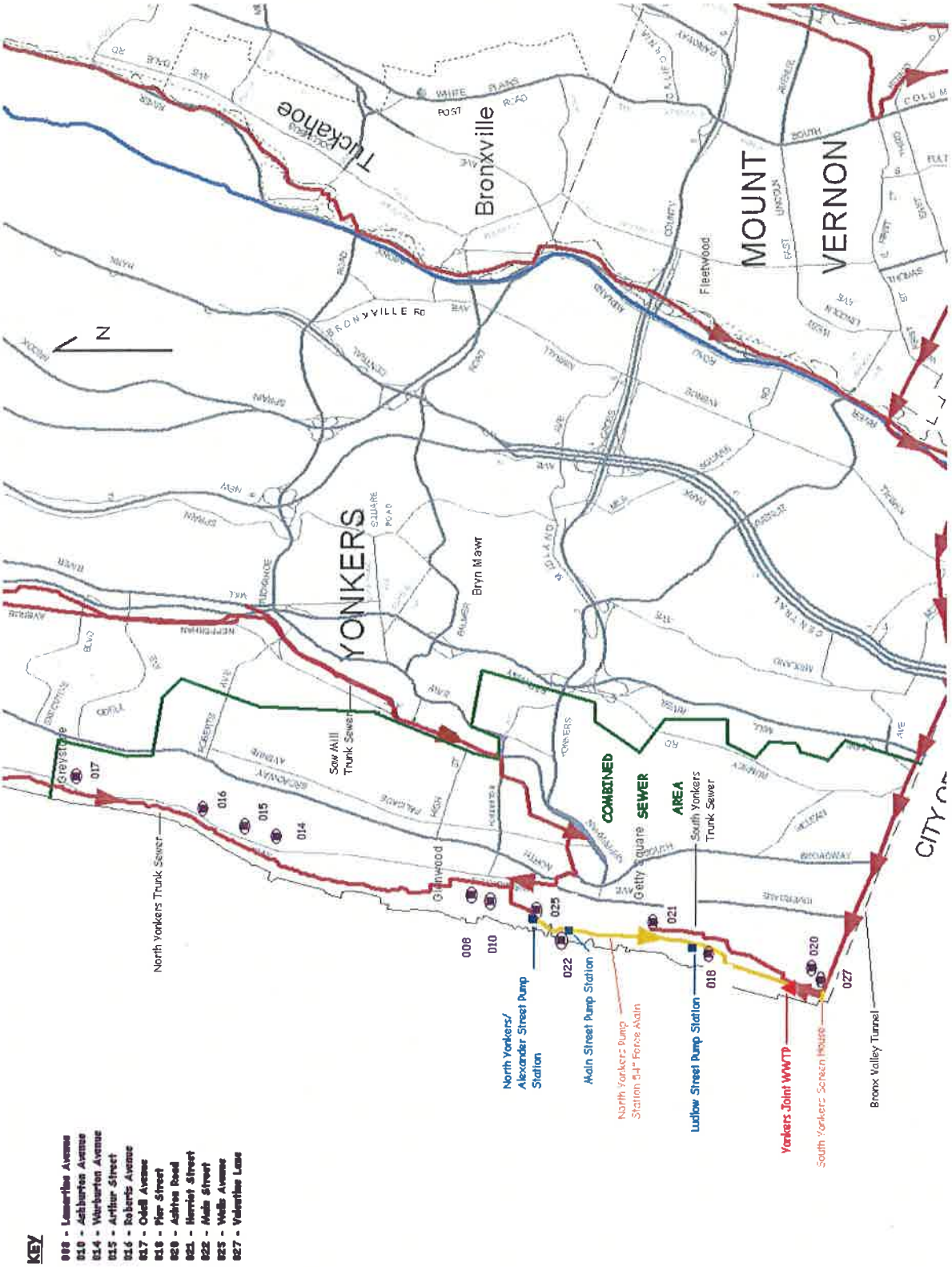
Westchester County
Department of Environmental Facilities

Location Map of CSO Outfalls



Appendix 3

Location Map of Regulators and County Owned Sewers in the CSO Area



REGULATOR AND TRUNK SEWER LOCATION MAP

Appendix 4

Schedule of Video Inspection of County Trunk Sewers in Combined Sewer Area

As part of the County's C.M.O.M. program, WCDEF has begun a schedule of video inspection of all County owned trunk sewers in all Districts. These inspections will occur in an approximate 10 year cycle, and will include all County owned sewers within the Combined Sewer Area as well. The County owned sewers within the Combined Sewer Area are listed below, with the estimated date of video inspection.

County Sewer Name	Pipe Length	Pipe Size	Approximate Inspection Date
Central Yonkers	700 feet	20"	Televised in 2009
South Yonkers	5,276 feet	21", 30" 36", 60"	Televised in 2009
North Yonkers	2,095 feet	48", 60"	Televised May, 2007 Greystone Train Station & Harriman Avenue and in 2010
North Yonkers (CSO Area)	11,879 feet	60" thru 72"	Year 2019
Saw Mill Tunnel	9560 feet	78"	Televised in 2014
Saw Mill Tunnel Ent. Sewer	228 feet	48"	Televised in 2014
North Yonkers Alexander Street	2460 feet	20", 24"	Televised in 2014
Saw Mill/North Yonkers Multi Channel	935 feet	Varies	Infrared inspection, 2007, Visual inspection Year 2018.
Ashton Road	522 feet	12", 16", 30"	Televised 2010
Hawthorne Ave. to Pier Street	473 feet	20", 42"	Televised 2010
South Yonkers C	481 feet	14"	Televised in 2014
South Yonkers C	850 feet	14"	Year 2019
South Yonkers D	665 feet	24"	Televised in 2014
South Yonkers E	601 feet	12"	Televised in 2014
South Yonkers F	268 feet	20"	Televised in 2014